IOWA STATE UNIVERSITY
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Volume 31 | Issue 2 Article 8

1969

Clinical Quiz Large Animal Medicine and Surgery

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Clinical Quiz

Large Animal Medicine and Surgery

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1

A client who very seldom requests your professional services asks you to treat the foot infection of his Angus cow. The owner states that the cow started limping several weeks ago and lately wouldn't eat, so he assumed it was infected and began injecting antibiotics. She didn't respond, instead her state of depression increased.

Your temperature check of the listless animal discloses a fever of 105°, but the "foot infection" turns out to be a simple case of interdigital "corns." Further conversation reveals that several of his purebred herd has a nasal discharge two weeks earlier and a few had severe coughs, but they recovered after several days and he did not consult professional help. The cow is on an almost complete silage diet and she is due to calve in three months.

The cow's eyes, nose, and mouth appear normal with no exudate or ulceration. Her lung sounds are normal although her respiratory rate is increased; heart sounds and rate also are normal. You discover on auscultation of the rumen that its activity is very slow and faint. Her feces are of near normal consistency but are black and tarry. Her external genitalia appear normal but on rectal examination you dismal but on rectal examination you discover an enlarged extended uterus; by putting pressure on the uterus you are able to cause a serous purulent material to exude from the vagina.

A blood count was done which resulted in the following:

RBC	6,350,000
Hb	10.3
PCV	32.5
WBC	4,380
Segs	17%
Juv	1
Lympho	62
Eos	7
Mono	13

What is your tentative diagnosis? What was the probable etiology?

2

History

This case involves 263 high grade Hereford cows in Iowa in the winter months. The cows had been in a cornstalk field from Nov. 1 to Feb. 20 and had been supplemented with salt, bonemeal, and occasionally alfalfa meal. After being removed from the stalk field, they were confined to a small dry lot and fed a vitamin-mineral supplement and 2 year old hay. No grain was fed. Within 30 to 60 days after confinement, ten animals became ill and died within six to ten days after the onset of symptoms.

* Mr. Cunningham and Mr. Meerdink are juniors in the College of Veterinary Medicine at Iowa State University.

Symptoms

In all cases, stiffness of the rear quarters was noted. This sign was followed by frequent urination, grinding of the teeth, a serous nasal discharge with some crusting of the muzzle and nares. The respiratory rate was double the normal rate. Muscular spasms, twitching and impaired vision were noted in a few cases. The temperature ranged from 101° F. to 103.8° F. The heart rate was moderately increased. The appetite was poor, and the feces were not disturbed, except in advanced cases where some scanty diarrhea was noted.

Laboratory Studies

Blood examinations for leptospirosis and brucellosis were negative. Repeated examinations of the cellular components of the blood were within normal ranges. Urine studies revealed normal constituents except for consistently positive ketone tests.

Postmortem Findings

Each case involved a twin pregnancy. Gestation time ranged from 7½ months to near term. None of the remaining 253 cows in the herd had twins. Secondary findings included fatty infiltration of the liver, and catarrhal gastroenteritis with atony, and impaction of the rumen as a consistent sign.

3

History and Symptoms

On Feb. 12, a 1,000 pound Hereford steer in a feedlot pen of 33 steers began showing signs of increased rate of respiration, frequent licking and biting of the skin behind the left shoulder and over the left foreribs, and occasional spasms of the diaphragm. During the following day, eight more steers were affected. All of the affected animals rubbed their heads and perineal regions on fences and other objects, producing severe trauma. The rectal temperature ranged from 103° F. early in the disease to 109° F near the terminal stages. The disease in each case developed rapidly and terminated fatally within a period of 24–48 hours.

Upon physical examination of the non-affected animals, abrasions and minor laceration of the perineal region were noted. Observations of the feedlot swine in the lot revealed that the swine would bite the perineal region of the recumbant steers, hence, stimulating the steers to arise and defecate. Further investigation of the premises and barns associated with the feedlot revealed a very heavy population of rats, but no evidence of disease was noted in them.

Do You Know These?

4) *Oestrus ovis* invades the body by what route?
5) Where does leptospirosis localize and how is it spread?
6) The Mallien test is used in the diagnosis of what disease?
7) In what part of the brain are the greatest population of Negri bodies found?
8) What are the "side bones" of a horse?
9) Why must cobalt be given orally rather than parentally in the treatment of deficiencies?
10) In edema disease of pigs, what age group is most commonly affected?
11) How many days after parturition does the "foal heat" occur?
12) Where's the site of injection for an epidural in the bovine?
13) When does ovulation occur in the bovine in relation to the estrous cycle?

Quiz Answers on page 68.

Graduating Seniors

The College of Veterinary Medicine will confer the degree of Doctor of Veterinary Medicine upon sixty-five graduating seniors on May 24, 1969.

Names and addresses of each will appear in the next issue of the *Iowa State University Veterinarian.*

List of Class Members

Robert S. Abraham
Alvin K. Aloiau
Richard W. Baird
Dean Barnett
Ronald Batz
Dwayne A. Beatty
John E. Beranek
Cornie M. Bleeker
Darrell R. Boettcher
Craig M. Ellsworth
Marshall D. Fox
Earl J. Goerdt
Roger A. Green
David E. Greiner
Douglas Gustafson
Roger A. Halverson
Ronald L. Hamm
Gary D. Hammill
David A. Hartwig
Joanne M. Holland
Donald C. Holst
Gene W. Hoy
Allen G. Ibsen
Judith L. Johnson
Thomas V. Johnson
James M. Jorgenson
Don King
Ronald G. King
Gene L. Koski
Theodore F. Larsen
Kenneth Liska
Larry Lounsberry
Curtis McDougall
Stephen J. Mead
Max A. Mekus
Vernon R. Moeller
Cletus Mosbach
Edward Movall
Richard J. Ouverson
John Lee Peters
Alvin R. Peterson
Terry L. Peterson
Francis F. Pisarik
Penelope A. Porter
Roger A. Rehmel
Merril Reinhiller
Larry G. Renze
Dean H. Riedesel
Doyle L. Rolston
Leon R. Schnack
Thomas J. Schomer
Jon T. Seeger
Montgomery Strathe
Walter Sturtz
William M. Svenson
Jerry L. Swan
Roger C. Swanson
James J. Tapper
Kenneth Throlson
Larry P. Tilly
Floyd W. Wagner
Dennis J. Whitsell
Stephen R. Whightman
Darrell D. Winterowd
Stanley Yoerger

Large Animal Clinical Quiz Answers

(1) In this case probably a mild IBR infection caused the death of the fetus which lead to the metritis. The black tarry stools were probably due to the high silage ration; this effect was probably enhanced by the toxic condition of the animal. Substitution of hay and some grain for the silage resulted in normal feces in approximately four days; feeding the silage caused the reappearance of blood in the feces in about 24 hours. After removal of the dead fetus, intrauterine antibiotic therapy, and diethylstilbesterol injections, the uterus involuted normally and the cow was released.

(2) Pregnancy toxemia

(3) Pseudorabies

4) Nasal

5) Kidney; urine

6) Glanders caused by *Malleomyces mallei*

7) Bovine, cerebellum; others hippocompus

8) The lateral cartilages of the third phalynx

9) Microbes utilize it in the rumen for B_{12} synthesis.

10) 6–14 weeks

11) 9 days

12) Between the last sacral and 1st coccygeal or between the 1st coccygeal and 2nd coccygeal vertebrae.

13) 8–12 hours after end of estrus.